

CLAIMS

What is claimed is:

1. A construction system for anchoring a structural member of a building to a base member of a building, the system comprising:

one or more anchoring devices, each anchoring device having a first portion and a second portion, the first portion of each anchoring device fixedly attached to the structural member and the second portion of each anchoring device fixedly attached to the base member; and

wherein each anchoring device comprises a fiber composite material.

2. The system of claim 1, wherein the structural member further comprises one of a reinforced wall and an unreinforced wall.

3. The system of claim 1, wherein the base member further comprises a member selected from the group consisting of a footing, a foundation, a floor, a roof, and a slab.

4. The system of claim 1, wherein the fiber composite material further comprises one of a flexible, uncured sheet and a flexible, uncured laminate.

5. The system of claim 1, wherein the fiber composite material further comprises a rigid, preformed plate.

6. The system of claim 1, wherein the first portion of each anchoring device is fixedly attached to the structural member using a bonding mechanism.

7. The system of claim 1, wherein the second portion of each anchoring device is fixedly attached to the base member using a bonding mechanism.

8. The system of claim 1, wherein the base member further comprises an internal wall defining a groove, and wherein the second portion of each anchoring device is at least partially disposed within the groove.

9. The system of claim 8, wherein the internal wall defining a groove in the base member is adjacent to and in line with a surface of the structural member.

10. The system of claim 8, further comprising an elongated member disposed within the groove for clamping or wedging the second portion of each anchoring device in the groove of the base member.

11. The system of claim 1, wherein each anchoring device further comprises an angle member having a first portion and a second portion, the first portion of the angle member being substantially perpendicular to the second portion of the angle member, the angle member for fixedly attaching the second portion of each anchoring device to the base member.

12. The system of claim 1, wherein the second portion of each anchoring device is sized to have a strength sufficient to withstand a predetermined load.

13. The system of claim 1, wherein each anchoring device has a sufficient strength to transfer a predetermined load from the structural member to the base member.

14. A construction system for anchoring a structural member of a building to a base member of a building, the system comprising:

a structural member comprising one of a reinforced wall and an unreinforced wall;

a base member comprising a member selected from the group consisting of a footing, a foundation, a floor, a roof, and a slab;

one or more anchoring devices, each anchoring device having a first portion and a second portion, the first portion of each anchoring device fixedly attached to the structural member and the second portion of each anchoring device fixedly attached to the base member; and

wherein each anchoring device comprises a fiber composite material.

15. The system of claim 14, wherein the fiber composite material further comprises one of a flexible, uncured sheet and a flexible, uncured laminate.

16. The system of claim 14, wherein the fiber composite material further comprises a rigid, preformed plate.

17. The system of claim 14, wherein the first portion of each anchoring device is fixedly attached to the structural member using a bonding mechanism.

18. The system of claim 14, wherein the second portion of each anchoring device is fixedly attached to the base member using a bonding mechanism.

19. The system of claim 14, wherein the base member further comprises an internal wall defining a groove, and wherein the second portion of each anchoring device is at least partially disposed within the groove.

20. The system of claim 19, wherein the internal wall defining a groove in the base member is adjacent to and in line with a surface of the structural member.

21. The system of claim 19, further comprising an elongated member disposed within the groove for clamping or wedging the second portion of each anchoring device in the groove of the base member.

22. The system of claim 14, wherein each anchoring device further comprises an angle member having a first portion and a second portion, the first portion of the angle member being substantially perpendicular to the second portion of the angle member, the angle member for fixedly attaching the second portion of each anchoring device to the base member.

23. A construction method for anchoring a structural member of a building to a base member of a building, the method comprising:

fixedly attaching a first portion of a composite fiber anchor to the structural member; and

fixedly attaching a second portion of the composite fiber anchor to the base member, wherein the composite fiber anchor has a sufficient strength to transfer a predetermined load from the structural member to the base member.

24. The method of claim 23, wherein fixedly attaching the second portion of the composite fiber anchor to the base member further comprises forming a groove in the base member and disposing the second portion of the composite fiber anchor at least partially in the groove.

25. The method of claim 24, wherein forming a groove in the base member further comprises positioning a wall of the groove in line with a surface of the structural member.

26. The method of claim 23, wherein fixedly attaching the second portion of the composite fiber anchor to the base member further comprises forming a groove between the structural member and the base member and disposing the second portion of the composite fiber anchor at least partially in the groove.

27. The method of claim 23, wherein fixedly attaching the first portion of the composite fiber anchor to the structural member and the second portion of the composite fiber anchor to the base member further comprises bonding the first portion of the composite fiber anchor to the structural member and the second portion of the composite fiber anchor to the base member.

28. The method of claim 23, wherein fixedly attaching the first portion of the composite fiber anchor to the structural member and the second portion of the composite fiber anchor to the base member further comprises mechanically fastening the first portion of the composite fiber anchor to the structural member and the second portion of the composite fiber anchor to the base member.

29. The method of claim 23, wherein fixedly attaching the second portion of the composite fiber anchor to the base member further comprises sizing the second portion of the composite fiber anchor such that it has a strength sufficient to withstand a predetermined load.

30. The method of claim 23, wherein the structural member further comprises one of a reinforced wall and an unreinforced wall.

31. The method of claim 23, wherein the base member further comprises a member selected from the group consisting of a footing, a foundation, a floor, a roof, and a slab.